CLAIMS

1. A monoclonal antibody detecting and binding monospecifically human Mcm3 both immunohistologically and immunobiochemically.

2. A monoclonal antibody detecting and binding monospecifically human Mcm3 both immunohistologically and immunobiochemically, whereby the monoclonal antibody has the same properties as the monoclonal antibody of the hybridoma cell line with the deposit number DSM ACC2388.

3. A monoclonal antibody detecting and binding monospecifically human Mcm3 both immunohistologically and immunobiochemically, whereby the epitope of the monoclonal antibody of the hybridoma cell line with the deposit number DSM ACC2388 is detected.

4.The monoclonal antibody according to claim 1, wherein the monoclonal antibody may be altered biochemically or molecular biologically or may be synthetic whereby the antibody lacks completely or partly portions that are necessary or unnecessary for the detection of Mcm3 or said portions are substituted by others imparting the antibody with further advantageous properties.

5. The monoclonal antibody according to claim 1, which is produced by the hybridoma cell line with the deposit number DSM ACC2388.

6. A hybridoma cell line which expresses a monoclonal antibody, detecting monospecifically and binding human Mcm3 both immunohistologically and immunobiochemically.

7. A hybridoma cell line according to claim 6, whereby the hybridoma cell line is the cell line with the deposit number DSM ACC2388.

8. Use of the monoclonal antibody according to any one of claims 1 to 5 in a detection method for human Mcm3.

9. Use of the monoclonal antibody according to any one of claims 1 to 5 for the immunohistological, immunocytological or immunobiochemical detection of human Mcm3 in a sample.

10. Use according to claim 9, characterised in that the sample is selected from a group consisting of serum, sputum, urine, and liquor.

11. Use according to claim 9, wherein the sample is tissue or fine needle aspiration.

12. Use according to claim 9, wherein the immunobiochemical detection comprises the methods ELISA, RIA, Western Blot, Far Western Blot, immunoprecipitation and affinity chromatographic steps.

13. Use according to claim 9, wherein the immunocytological method comprises FACS and MACS.

14. Use according to claim 9, wherein the immunohistochemical detection comprises fluorescence, radioactive, enzymatic and chemiluminescence methods.

15. A process for the production of the antibody according to any one of claims 1 to 5, characterised in that an animal is immunised with human Mcm3, and monoclonal antibodies are obtained after the fusion of

spleen cells of the animal with myeloma cells which comprises the steps :

(i) initial screening of the hybridoma by means of an immunobiochemical method

(ii) screening of the hybridoma that where positive in step (i) by means of an immunohistochemical method.

16. A process for the production of purified human Mcm3, characterised in that the monoclonal antibody according to any one of claims 1 to 5 is used.

17. A process for the production of purified human Mcm3, characterised in that the process comprises an affinity chromatography step with a monoclonal antibody according to any one of claims 1 to 5.

18. A process for the production of purified human Mcm3, characterised in that the process comprises an immunoprecipitation step with a monoclonal antibody according to any one of claims 1 to 5.

19. A diagnostic composition comprising a monoclonal antibody according to any one of claims 1 to 5.

20. Use of a monoclonal antibody according to any one of claims 1 to 5 for the production of a preparation for the therapy of tumours, allergies, auto-immunopathies, scar formation, inflammation and rheumatic diseases as well as the suppression of defense reactions of transplantations.

21. Pharmaceutical composition comprising monoclonal antibodies according to any one of claims 1 to 5 together with pharmaceutical acceptable adjuvants.

22. Diagnostic kit comprising the monoclonal antibody according to any of claims 1 to 5.

23. Diagnostic kit for the combined detection of the expression of Mcm3, Ki-67 and p27 for tumour diagnosis.

24. A method of preventing or treating a disease caused by or contributed by the activity or level of Mcm3 expression, comprising adminstering to the subject an effective amount of a pharmaceutical composition comprising an antibody according to any of claims 1 to 5, together with a pharmaceutically acceptable carrier.